

Giant Twisted Left Ovarian Serous Cystadenoma in a 19-Year-Old Girl: A Case Report

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Abstract:

➤ *Background:*

Ovarian serous cystadenomas are benign epithelial tumors that can attain enormous size and occasionally undergo torsion. They are uncommon in adolescents. We report a case of a giant twisted left ovarian serous cystadenoma in a 19-year-old woman who was treated with fertility-preserving surgery.

➤ *Case Presentation:*

A 19-year-old nulliparous woman presented with progressive abdominal distension over 7 months, associated with early satiety, reduced appetite, and weight loss. Her menstrual cycles were regular. Examination revealed a stable patient with a grossly distended abdomen measuring 30 cm from the symphysis pubis and a firm, mobile intra-abdominal mass. Exploratory laparotomy revealed a left ovarian tumor twisted once on its pedicle, occupying the entire abdomen and weighing 5 kg. Cystectomy was performed without spillage. The uterus was normal, both fallopian tubes were normal, and the right ovary was rudimentary. Intraoperative assessment showed no macroscopic features of malignancy. Histopathology confirmed a benign serous cystadenoma.

➤ *Conclusion:*

Giant ovarian serous cystadenomas can present with chronic progressive distension, even in young women. Torsion can be partial or complete. Fertility-sparing cystectomy is feasible and preferred when the contralateral adnexa and uterus are normal. A thorough histopathological examination is essential to exclude malignancy.

Keywords: Ovarian Serous Cystadenoma; Giant Ovarian Cyst; Adnexal Torsion; Adolescent; Fertility-Sparing Surgery; Case Report.

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I. INTRODUCTION

Ovarian cysts are relatively common in adolescents and young women; most are functional and resolve spontaneously. Neoplastic ovarian cysts, particularly epithelial tumors, are less frequent in this age group, where germ-cell tumors predominate. Serous cystadenomas are benign epithelial neoplasms that account for a substantial proportion of benign ovarian tumors in adults but are reported less frequently in adolescents [1,2].

These tumors may grow to an enormous size, filling the abdominal cavity and causing progressive abdominal distension, early satiety, and constitutional symptoms. Torsion is a recognized complication, especially with large mobile cysts, and may present acutely or, less commonly, with intermittent or chronic symptoms when the twist is partial [3,4].

We present a case of a 19-year-old girl with a 5 kg left ovarian serous cystadenoma who had undergone a single twist and was successfully managed by cystectomy with preservation of reproductive potential.

II. CASE PRESENTATION

A 19-year-old unmarried, nulliparous girl presented to the gynecology outpatient clinic with a 7-month history of progressive abdominal distension. She reported early satiety, reduced appetite, and unintentional weight loss. There was no history of acute abdominal pain, vomiting, fever, or urinary or bowel symptoms. Menstrual cycles were regular (28–30-day cycle, 4–5 days' flow). She denied any sexual activity or previous abdominal surgery. There was no significant past medical or family history.

On general examination, the patient was hemodynamically stable (pulse, 82 beats/min; blood pressure, 110/70 mmHg). She appeared mildly cachectic. Abdominal examination revealed gross distension measuring 30 cm from the symphysis pubis to the xiphisternum. A firm, mobile, non-tender intra-abdominal mass was palpable; however, the upper border could not be defined clearly because of the size of the mass. Shifting dullness was absent. Pelvic examination was deferred in view of the patient's virgin status.

Laboratory investigations, including full blood count, renal and liver function tests, and serum tumor markers (CA-125, AFP, β -hCG, and LDH), were within normal limits. Abdominal ultrasonography demonstrated a large multiloculated cystic mass occupying the entire abdomen and pelvis, and the ovaries could not be clearly identified.

Computed tomography confirmed a giant cystic abdomino-pelvic mass of probable ovarian origin without solid components or lymphadenopathy.

After informed consent and counselling regarding fertility preservation, the patient underwent exploratory laparotomy through a midline incision. Intraoperatively, a huge left ovarian cystic tumor was found occupying the whole abdominal cavity. The tumor was twisted once on its pedicle. The cyst wall was smooth, thin, and translucent, with no surface excrescences or ascites. There was no evidence of rupture or spillage of contents. The uterus was of normal size and shape; both fallopian tubes appeared normal; the right ovary was rudimentary. No peritoneal deposits or enlarged lymph nodes were noted.

After careful detorsion, left ovarian cystectomy was performed while carefully preserving the residual ovarian tissue. The specimen weighed 5 kg. The cyst was intact and sent for histopathological examination. The postoperative course was uneventful, and the patient was discharged on the fourth postoperative day. Gross examination of the specimen revealed a large unilocular to multilocular cystic mass with a smooth outer surface and thin walls filled with clear serous fluid. Histopathological examination showed a cyst lined by a single layer of cuboidal to columnar epithelium with cilia, resting on a fibrous stroma, without nuclear atypia, mitotic activity, or invasion, consistent with a benign serous cystadenoma.



Fig 1. Postoperative Photograph of a Giant Left Ovarian Cystic Tumor (After Extraction) Weighing Approximately 5 kg. The External Surface is Smooth and Intact

At the 3-month follow-up, the patient was asymptomatic, had resumed normal menstruation, and ultrasonography showed a normal residual left ovary and uterus.

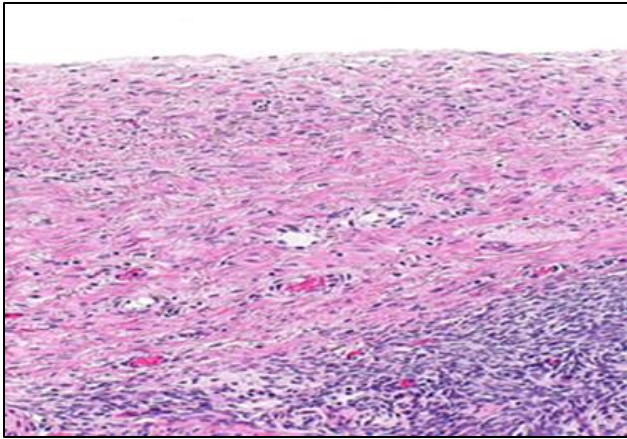


Fig 2. Histopathology of the Ovarian Cyst Wall (H&E Staining). The Cyst is Lined by a Single Layer of Cuboidal to Low Columnar Epithelium with Occasional Cilia Resting on a Fibrous Stroma. No Nuclear Atypia or Invasion is Present, Consistent with Serous Cystadenoma

III. DISCUSSION

Serous cystadenomas are the most common benign epithelial tumors of the ovary. They typically occur in women of reproductive age but can also be encountered in adolescents, although less frequently than germ cell tumors [1,5]. Giant ovarian cysts (>10–15 cm or weighing several kilograms) are uncommon in modern practice because of earlier detection; nevertheless, cases exceeding 5 kg continue to be reported, especially in settings with delayed presentation [6,7].

Progressive abdominal distension over months, as seen in our patient, is the classic presentation of a slowly enlarging benign cyst. Early satiety and weight loss reflect mechanical compression of the stomach and reduced caloric intake, rather than malignancy. The absence of acute pain despite a single twist of the pedicle suggests that the torsion was incomplete or intermittent, allowing continued vascular supply and preventing infarction [3,8].

Imaging (ultrasound and CT) is essential for characterization and surgical planning. Normal serum tumor marker levels further support a benign etiology, although they do not exclude malignancy entirely. The decision to perform a laparotomy rather than laparoscopy was influenced by the enormous size of the mass and the desire to avoid rupture and spillage.

Fertility-sparing surgery is the standard of care for young women with presumed benign diseases. Cystectomy with preservation of residual ovarian tissue, as performed in this

case, is preferred when the contralateral ovary and uterus are normal. The finding of a rudimentary right ovary underscores the importance of conserving every possible follicle-containing tissue on the affected side [9].

Histopathology remains the definitive diagnostic modality. Serous cystadenomas are lined by a single layer of tubal-type epithelium (cuboidal or columnar, often ciliated) without atypia or invasion [10]. The absence of spillage and benign histology confer an excellent prognosis with negligible risk of recurrence.

This case highlights that epithelial ovarian tumors, although less common than germ cell tumors in adolescents, must be included in the differential diagnosis of giant abdomino-pelvic masses. Prompt surgical intervention with fertility preservation offers excellent outcomes.

IV. CONCLUSION

Giant twisted ovarian serous cystadenomas can present with chronic progressive abdominal distension in adolescents and young women. Fertility-sparing cystectomy is feasible and should be the preferred approach when malignancy is not suspected intraoperatively. However, histopathological confirmation is mandatory. Awareness of this condition can prevent unnecessary radical surgery and preserve reproductive potential.

DECLARATIONS

➤ *Ethics Approval and Consent to Participate*

In this case report, written informed consent was obtained from the patient. A copy of the consent form is available on record. Approval to publish was obtained from the relevant authorities.

➤ *Consent for Publication:*

Written informed consent (in Swahili) was obtained from the patient for the publication of this case report and accompanying images. A copy of the written consent is available for review by the editor-in-chief of this journal.

➤ *Competing Interests:*

The authors declare no competing interests.

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➤ *Authors' Contributions:*

GSM, NEK, and TAM performed the operation and patient follow-up. GSM and BKM reviewed the literature and wrote the manuscript. GSM and JJK revised the manuscript critically for important intellectual content. All authors read and approved the final manuscript.

➤ *Abbreviations;*

CA-125-, AFP- alpha-fetoprotein, β -hCG, - A beta human chorionic gonadotropin (hCG), LDH - lactate dehydrogenase, CT-Scan-Computerized tomography, MD-Medical Doctor, MMED-Masters of Medicine, MRI-scan - Magnetic Resonance Imaging,

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